

# **A Reconfigurable Gaussian/Triangular Basis Functions Computation Circuit**

**Abuelma'Ati, MT; Shwehneh, A**

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King Fahd University of Petroleum & Minerals

**<http://www.kfupm.edu.sa>**

## **Summary**

A CMOS Gaussian/Triangular Basis functions computation circuit suitable for analog neural networks is proposed. The circuit can be configured to realize any of the two functions. The circuit can approximate these functions with relative root-mean-square error less than 1%. It is shown that the center, width, and peak amplitude of the dc transfer characteristic can be independently controlled. SPICE simulation results using 0.18  $\mu$ m CMOS process model parameters of TSMC18 technology are included.

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